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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SMITH, RICHARD A

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,001	RIBI ET AL.	
	Examiner	Art Unit	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 37-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 37-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 April 2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-35 and 37-43 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 18 and 35 are rejected based on the limitation of "a thermopolymeric switching medium" for the following reason. In further reading and consideration of the specification and based on recollection from past conversations with examiners who work in the chemical arts, it appears to the Examiner that the term thermopolymeric switching medium is indefinite. This could be a lack of understanding on the part of the Examiner and in an attempt to resolve this issue before preparing this Office action, the Examiner had left messages requested a conversation in hopes of clarifying this issue.

It appears to the examiner that the claims and specification do not clearly describe what is considered to be thermopolymeric and the term itself is exceptionally broad. The definition provided is an organic polymer, a synthetic organic polymer, and the examples given in the specification are, i.e., example 1 - C30 acrylic acid ester triacontanol and corresponding C30 polymer, example 2 - a liquefied medium made from a Landec Interlemer material, and examples 3-5 involving Landec Corp. 269-65 material. The specification and claims however provide an extensive list of inert additives, of interactive additives and of emulsifiers. The few examples listed as thermopolymeric versus the term itself and all it encompasses appears to be an incongruity. Furthermore, the Examiner had taken the impression from the examiners in the chemical arts that the specification and claim language were too generic and broad for the other examiners to evaluate or provide assistance.

Furthermore, US 5,537,950 and 5,323,730 as addressed in the specification are considered as organic but not described as thermopolymeric, yet it appears to the examiner that these organic compounds along with waxes such as US 2,938,384 to Soreng et al. are

thermopolymeric. Is the applicant applying an industrial definition, standard, or practice in defining what is considered, or not considered, as thermopolymeric?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,144,880 to Schmit.

Schmit teaches a thermal indicator having a body having an orifice (18 with frangible cover 33), an indicating means, a barrel with a cavity, a sliding indicator in the barrel cavity and means for resiliently biasing the indicator away from the retracted position and toward the extended position, and discloses that the thermal indicator is designed to incorporate a thermopolymeric switching medium contained within the body such as a suitable hot melt adhesive or other thermoplastic adhesives (column 2, lines 62-68).

The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hira, 535 F.2d 67, 190

USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to the intended use of the apparatus, i.e., for indicating "that the food is cooked to a desired temperature and doneness" and "visually indicating that the food is cooked to a desired temperature and doneness": This intended use has not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

6. Claims 1, 2, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,323,730 to Ou-Yang.

Ou-Yang '730 teaches a thermal indicator having a body having an orifice, an indicating means (28), a barrel with a cavity, a sliding indicator in the barrel cavity and means for resiliently biasing the indicator away from the retracted position and toward the extended position, and discloses that the thermal indicator is designed to incorporate a thermopolymeric switching medium contained within the body when the thermopolymeric switching medium is any of the compounds discussed in column 5 lines 19-51 and/or disclosed in the tables in column 6.

7. Claims 1, 2, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,537,950 to Ou-Yang.

Ou-Yang '950 teaches a thermal indicator having a body having an orifice, an indicating means (28), a barrel with a cavity, a sliding indicator in the barrel cavity and means for resiliently biasing the indicator away from the retracted position and toward the extended position, and discloses that the thermal indicator is designed to incorporate a thermopolymeric switching medium contained within the body when the thermopolymeric switching medium is any of the compounds discussed in column 5 and/or disclosed in the table in column 6.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 2 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit in view of U.S. 5,109,054 to Smith.

Schmit teaches all that is claimed as discussed in the above rejections of claim 1 except for the limitations of claims 2 and 14-17.

Smith discloses a hot melt adhesive employing an organic thermopolymeric material (polymer fatty acid polyamide resin) and comprising at least one emulsifier selected from the group consisting of lipids, long chain alcohols, lecithins, glycol lipids, quaternized amines with lipid tails, and charged ionic detergents, and combinations thereof (abstract and column 10, lines 1-10) that can vary from 0.5% to 10%.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the hot melt adhesive, as taught by Smith, to the thermal indicator, taught by Schmit, in order to allow the thermal indicator to work as intended and described by Schmit.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Smith discloses that the type of emulsifier and amount may vary and discloses a range of 0.5% to 10%. Therefore, the limitations regarding the percentages by weight of the emulsifier as claimed is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Smith, as stated above, that a person having

ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

10. Claims 2-13, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit in view of U.S. 6,239,250 to Hefner et al.

Schmit teaches all that is claimed as discussed in the above rejections of claim 1 except for the medium being organic and the specific composition limitations of claims 3-13, 35 paragraph e) and 37.

Hefner et al. discloses a hot melt adhesive employing organic polymeric materials adjustable for melting temperatures in the range of 50°C to 165°C (column 3, lines 47-58) and that includes various interactive and other additives designed to be tackifiers, oils, plasticizers, waxes, fillers and the like (column 6, lines 17-57) in order to achieve the desired characteristic (the performance characteristics being in column 6, lines 58-67) and other interactive additives such as thermal stabilizers, UV stabilizers and antioxidants (column 7, lines 1-8). Hefner et al. also discloses in the claims various additives including adhesion promoters, coupling agents, other typical hot melt adhesive polymers, and the use of non-hot melt polymers.

Hefner et al. discloses that the at least one inert additive (column 6, lines 45-57) is selected from the groups as claimed, i.e., in this case chalk, glass, sand, and/or high boiling liquid polymeric material in order to improve creep, lower cost or change viscosity.

Hefner et al. discloses the at least one interactive additive (column 6, lines 17-35) is selected from the group as claimed, i.e., in this case, bees wax, petroleum distillation analogs, synthetic organic analogs, alcohols, esters, etc. in order to affect one or more of the characteristics as listed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the hot melt adhesive, as taught by Hefner et al., to the thermal indicator, taught by Schmit, in order to allow the thermal indicator to work as intended and described by Schmit.

With respect to the at least one inert additive and the amount thereof by weight with respect to the switching medium, i.e., 0.1-99 %, 5-95 % and 10-90 %, and the at least one interactive additive and the amount thereof by weight with respect to switching medium, i.e., 0.1-99 %, 5-95 %, 10-90 % and 20-80 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Therefore, the limitations regarding the percentages by weight of the inert additive and of the interactive additive are only considered to be the "optimum" values of the inert additives and the interactive additives of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Hefner et al, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on provided the optimum performance characteristics for the intended use, e.g. plastic/paper

bonding, while lower creep, costs or modify viscosity, as already suggested by Hefner et al. See In re Boesch, 205 USPQ 215 (CCPA 1980).

With respect to claim 35: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to the intended use of the apparatus in claim 35, i.e., "indicated the food is in an uncooked state", "indicating that the food is in a cooked state", for indicating "that the food is cooked to a desired temperature and doneness" and visually indicating "that the food is cooked to a desired temperature and doneness": These intended uses have not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

11. Claims 14-17 and 38-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit and Hefner et al. as applied to claims 2-13, 35 and 37 above, and further in view of U.S. 4,871,811 to Gaku et al.

Schmit and Hefner et al. disclose all that is claimed as discussed in the above rejections of claims 2-13, 35 and 37. Furthermore, Hefner et al. discloses that the polymerization process involves a reaction solvent and that it must serve to dissolve and keep the catalyst in solution during the polymerization reaction and discloses a list of preferred solvents which include organic solvents including hydrocarbons such as toluene. Hefner et al. discloses that nonsolvents such as water can be contemplated (the paragraph at column 4, line 50 to column 5); that crystallinity must be controlled in the polymerization process (column 4, lines 12-25); and that a continuous stirring tank is used for the preparation.

Gaku et al. discloses a hot melt adhesive composition employing thermopolymeric plastics in combination with other additives and discloses in a method that mixing is done with organic solvents including toluene to dissolve the components that this represents a relatively emulsified condition (column 5, lines 35-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure that the composition in the mixer is emulsified and is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life,

water resistance, etc. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Hefner et al. and Gaku et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

12. Claims 14-17 and 38-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit and Hefner et al. as applied to claims 2-13, 35 and 37 above, and further in view of U.S. 5,852,083 to Walsh et al.

Schmit and Hefner et al. disclose all that is claimed as discussed in the above rejections of claims 2-13, 35 and 37. Furthermore, Hefner et al. discloses that the polymerization process involves a reaction solvent and that it must serve to dissolve and keep the catalyst in solution during the polymerization reaction and discloses a list of preferred solvents which include organic solvents including hydrocarbons such as toluene. Hefner et al. discloses that nonsolvents such as water can be contemplated (the paragraph at column 4, line 50 to column 5); that crystallinity must be controlled in the polymerization process (column 4, lines 12-25); and that a continuous stirring tank is used for the preparation.

Walsh et al. discloses that a hot melt adhesive composition and discloses in the prior art (column 2, lines 3-22) that mixers use an emulsifier to help shear and to reduce the size of solid particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure that the composition in the mixer is emulsified, to reduce the solid particle sizes and to assure the batch is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the specific materials disclosed, i.e., at least one emulsifier selected from the group consisting of lipids, long chain alcohols, lecithins, glycol lipids, quaternized amines with lipid tails, and charged ionic detergents, and combinations thereof: This at least one emulsifier is only considered to be the use of "optimum" or "preferred" materials that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide to provide as disclosed by Hefner et al. and by Walsh et al. since they are well known types of emulsifiers and since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshen, 125 USPQ 416.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column

6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Walsh discloses that an emulsifier is added. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Hefner et al. and Walsh et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

13. Claims 3-13, 20-30, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou-Yang '950 in view of U.S. 6,239,250 to Hefner et al.

Ou-Yang '950 teaches all that is claimed as discussed in the above rejections of claim 1, 2, 18 and 19 except for the medium and the specific composition limitations of claims 3-13, 20-30, 35 paragraph e) and 37.

Hefner et al. discloses a thermally responsive adhesive employing organic polymeric materials adjustable for melting temperatures in the range of 50°C to 165°C (column 3, lines 47-58) and that includes various interactive and other additives designed to be tackifiers, oils, plasticizers, waxes, fillers and the like (column 6, lines 17-57) in order to achieve the desired characteristic (the performance characteristics being in column 6, lines 58-67) and other

interactive additives such as thermal stabilizers, UV stabilizers and antioxidants (column 7, lines 1-8).

Hefner et al. discloses that the at least one inert additive (column 6, lines 45-57) is selected from the groups as claimed, i.e., in this case chalk, glass, sand, and/or high boiling liquid polymeric material in order to lower cost or change viscosity.

Hefner et al. discloses the at least one interactive additive (column 6, lines 17-35) is selected from the group as claimed, i.e., in this case, bees wax, petroleum distillation analogs, synthetic organic analogs, alcohols, esters, etc. in order to affect one or more of the characteristics as listed.

Therefore with respect to the at least one inert additive and the amount thereof by weight with respect to the switching medium, i.e., 0.1-99 %, 5-95 % and 10-90 %, and the at least one interactive additive and the amount thereof by weight with respect to switching medium, i.e., 0.1-99 %, 5-95 %, 10-90 % and 20-80 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Therefore, the addition of the inert additive and limitations regarding the percentages by weight of the inert additive, and the addition of the interactive additive and of the percentages by weight of the interactive additive are only considered to be the "optimum" values of the inert additives and the interactive additives of the thermal indicator, disclosed by Ou-Yang '950 as modified by Hefner et al, as stated above, that a person having ordinary skill in the art would have been able

to determine using routine experimentation based, among other things, on provided the optimum performance characteristics for the intended use, e.g. costs, modify viscosity, usage life, as already suggested by Hefner et al. See In re Boesch, 205 USPQ 215 (CCPA 1980).

With respect to claim 35: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to the intended use of the apparatus in claim 35, i.e., "indicated the food is in an uncooked state", "indicating that the food is in a cooked state", for indicating "that the food is cooked to a desired temperature and doneness" and visually indicating "that the food is cooked to a desired temperature and doneness": These intended uses have not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

14. Claims 14-17 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou-Yang '950 in view of U.S. 4,871,811 to Gaku et al.

Ou-Yang '950 disclose all that is claimed as discussed in the above rejections of claims 1, 2, 18 and 19 except for the limitations in claims 14-17 and 31-34.

Gaku et al. discloses a hot melt composition employing thermopolymeric plastics in combination with other additives and discloses in a method that mixing is done with organic solvents including toluene to dissolve the components that this represents a relatively emulsified condition (column 5, lines 35-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure that the composition in the mixer is emulsified and is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Ou-Yang '950 discloses that additives are added. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator, disclosed by Ou-Yang '950 as modified by Gaku et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

15. Claims 14-17 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou-Yang '730 in view of U.S. 4,871,811 to Gaku et al.

Ou-Yang '730 disclose all that is claimed as discussed in the above rejections of claims 1, 2, 18 and 19 and further discloses that blends can be used (column 5 lines 52-66). Ou-Yang '730 does not teach the limitations in claims 14-17 and 31-34.

Gaku et al. discloses a hot melt composition employing thermopolymeric plastics in combination with other additives and discloses in a method that mixing is done with organic solvents including toluene to dissolve the components that this represents a relatively emulsified condition (column 5, lines 35-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure that the composition in the mixer is emulsified and is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Ou-Yang '730 discloses that additives are added. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator, disclosed by Ou-Yang '730 as modified by Gaku et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

Response to Arguments

16. Applicant's arguments filed 13 April 2006 with respect to Schmidt have been fully considered but are not persuasive

With respect to the intended uses as noted in the applied rejections above, i.e., "indicated the food is in an uncooked state", "indicating that the food is in a cooked state", for indicating "that the food is cooked to a desired temperature and doneness" and visually indicating "that the food is cooked to a desired temperature and doneness": A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, Schmidt clearly discusses the prior art as being for doneness and discloses that his can measure temperature from an uncooked state along with from the cooked state or almost completely cooked state, or when being warmed after being cooked, or otherwise. as described in column 1-2 and it appears to the examiner that the Schmidt's prior art structure is capable of performing the intended use and therefore meets the intended uses as claimed.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related indicators or components or compositions thereof.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'RAS', with a stylized flourish at the end.

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
June 26, 2006